REMARKS

This application has been reviewed in light of the Office Action dated April 6, 2004. Claims 1-12 are pending in this application. Claims 1-9 have been amended to define still more clearly what Applicant regards as his invention. Claims 10-12 have been added to provide Applicant with a more complete scope of protection. Claims 1, 5, and 9-12 are in independent form. Favorable reconsideration is requested.

The Office Action objected to the drawings and to the specification. As described above, Applicant attaches hereto corrected drawings and have amended the specification to address the informalities pointed out by the Examiner in the Office Action. Applicant submits that the objection to the drawings and specification have been obviated, and respectfully requests their withdrawal.

The Office Action rejected Claims 1-9 under 35 U.S.C § 103(a) as being unpatentable over U.S. Patent No. 5,093,869 (Alves) in view of U.S. Patent No. 5,923,822 (Takahashi). Applicant respectfully traverses this rejection.

Applicant submits that amended independent Claims 1, 5, and 9, together with the remaining claims dependent thereon, are patentably distinct from the proposed combination of the cited prior art at least for the following reasons.

The aspect of the present invention set forth in Claim 1 is an image processing apparatus capable of drawing a gradient fill object defined by at least two apexes each having coordinate data and gray level value. The apparatus includes a detection means for detecting whether or not an object is a gradient fill object having gradation in one of horizontal and vertical directions, a pixel count detection means for detecting a number of pixels which have substantially the same gray level value and are

consecutively present in a direction perpendicular to the direction of gradation detected by the detection means, a drawing means for drawing at least one pixel for different gray level values in the direction of gradation, based on the coordinate data and gray level value of the gradient fill object, and a replication means for replicating, in the direction perpendicular to the direction of gradation, the pixels drawn by the drawing means, in a number equal to the number of pixels detected by the pixel count detection means.

Among other important features of Claim 1 is that in order to draw, at high speed, a gradient fill object having a gradient in the horizontal or the vertical direction, the apparatus draws pixels in the direction of gradation and replicates the drawn pixels in the direction perpendicular to the direction of gradation. Support for the drawing and replicating features of Claim 1 can be found in the application as follows. In regard to the drawings means, see Fig. 6B, the reference to "GENERATED ONLY ONE LINE" and in Fig. 7, the loop of S6001-S6005, and see Fig. 8B, the reference to "START PIXEL (FIRST LINE), START PIXEL (SECOND LINE) and Fig. 5, the loop of S5001-S5004. In regard to the replication means, see Fig. 6B, the reference to "COPY LINE IN NUMBER EQUAL TO THE NUMBER OF LINES" and S5005 in Fig. 5, the reference to "COPY LINE IN NUMBER EQUAL TO THE NUMBER OF LINES" and in Fig. 8B, the reference to "COPY PIXEL IN NUMBER EQUAL TO THE NUMBER OF LINES", Reference S6006 in Fig. 7 and the loop of S5001-S5004 in Fig. 5. Also, in Claims 4 and 8, the recitation "drawing" is supported by S6001 in Fig. 7 and the recitation "replicating" is supported by S6003 in Fig. 7. As always, it is to be understood that the claim scope is not limited by the details of this embodiment.

Alves et al., as understood by Applicant, relates to a scene recognition system and method for use with a missile guidance and tracking system, which employs low and high level feature detection to identify and track a target. The Office Action states at page 4 that "[t]he system of figure 2 of Alves processes data from objects that have particular gradient characteristics." From this statement, Applicant understands the Examiner to consider the gradient of lines generated by gradient based segmentation processing 33 of Fig. 2 as corresponding to the gradient of gray level value in a gradient fill object according to the apparatus having the features recited in Claim 1. Applicant submits, however, that the gradient of lines of the apparatus in Alves et al. is different from, and does not suggest, the gradient of gray level value of the apparatus having the features recited in Claim 1: Alves et al. only extracts the gradient of lines from input data, and Applicant submits that nothing has been found in Alves et al. that would teach or suggest drawing pixels in different gradient gray level values to create a gradient fill object, as recited in Claim 1. Moreover, the Office Action at page 5 states (and Applicant agrees) that "Alves does not disclose expressly [a] replacement means . . . ."

Takahashi, as understood by Applicant, relates to an image forming apparatus and method. The Office Action states that Takahashi discloses "a replacement means" (figure 4(8)). Applicant submits that Takahashi discusses replacing pixels in some indicated area of a picture with a rainbow pattern as shown, for example, in Figs. 5(a), 5(b) and 5(e). However, as noted above, Applicant has amended the claims to include the feature, for example, that the replication means replicates the pixels drawn by the newly-added feature of the drawing means, which Applicants submit is not taught or suggested by Takahashi.

Accordingly, Applicant submits that nothing has been found in Alves et al. and Takahashi, when taken separately or in any proper combination (assuming such combination would even be permissible) that would teach or suggest a drawing means and replication means, as recited in Claim 1.

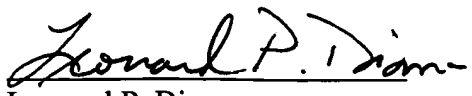
Independent Claims 5 and 9 are method and memory medium claims, respectively, that correspond to apparatus Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1. Additionally, new independent method Claims 10-12 are patentable over the cited prior art at least because each claim includes the feature of a drawing step, as recited therein.

The other rejected claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and the allowance of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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